

CLAIMS

I claim:

1. A method for identifying motion in a sequence of images comprising:

determining a difference in pixel value between a pixel in a first image and a

5 corresponding pixel in a second image,

determining an image gradient measure in a vicinity of the pixel, and

classifying the pixel as stationary based on the difference in pixel value and the image
gradient measure.

10 2. The method of claim 1, further including:

classifying the pixel as stationary based on a comparison of the difference in pixel value
to a defined threshold level.

3. The method of claim 1, wherein

15 determining the image gradient includes:

determining a first average change in pixel values between pixels to the left and
right of the pixel, and

determining a second average change in pixel values between pixels above and
below the pixel.

20 4. The method of claim 1, further including

aligning the first image and the second image.

5. The method of claim 1, further including

25 classifying the pixel as non-stationary if a difference between the difference in pixel
value and the image gradient measure is greater than a defined threshold level.

6. The method of claim 1, wherein

30 classifying the pixel is further based on a misalignment factor that corresponds to an
estimate of a misalignment between the first and second images.

7. A motion detecting system comprising:

a processor that is configured to:

determine a difference in pixel value between a pixel in a first image and a corresponding pixel in a second image,

5 determine an image gradient measure in a vicinity of the pixel, and

classify the pixel as containing stationary or moving data, based on the difference in pixel value and the image gradient measure.

8. The motion detecting system of claim 7, wherein

10 the processor is further configured to classify the pixel as containing stationary or moving data, based on a comparison of the difference in pixel value to at least one of:

a defined threshold level, and

a threshold level that is dependent upon a misalignment factor that corresponds to a degree of misalignment between the first and second images.

9. The motion detecting system of claim 7, wherein

the processor is configured to determine the image gradient by:

determining a first average change in pixel values between pixels to the left and right of the pixel, and

20 determining a second average change in pixel values between pixels above and below the pixel.

10. The motion detecting system of claim 7, wherein

the processor is further configured to

25 align the first image and second images.

11. The motion detecting system of claim 7, wherein

the processor classifies the pixel as containing moving data if a difference between the difference in pixel value and the image gradient measure is greater than a defined threshold
30 level.

12. The motion detecting system of claim 7, further including
one or more cameras that are configured to provide the first and second images.

5

13. A computer program, which, when executed by a processor, causes the processor to:
determine a difference in pixel value between a pixel in a first image and a corresponding
pixel in a second image,
determine an image gradient measure in a vicinity of the pixel, and
10 classify the pixel as containing stationary or moving data, based on the difference in pixel
value and the image gradient measure.

14. The computer program of claim 13, which further causes the processor to:
classify the pixel as containing stationary or moving data, based on a comparison of the
15 difference in pixel value to at least one of:
a defined threshold level, and
a threshold level that is dependent upon a misalignment factor that corresponds to
a degree of misalignment between the first and second images.

20 15. The computer program of claim 13, wherein the image gradient is determined by:
determining a first average change in pixel values between pixels to the left and
right of the pixel, and
determining a second average change in pixel values between pixels above and
below the pixel.

25

16. The computer program of claim 13, which further causes the processor to
align the first image and second images.

17. The computer program of claim 13, which further causes the processor to
30 classify the pixel as containing moving data if a difference between the difference in
pixel value and the image gradient measure is greater than a defined threshold level.